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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,995	05/03/2006	Stijn Vancompernolle	016782-0358	4929
22428	7590	12/22/2008	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				FREEMAN, JOHN D
1794		ART UNIT		PAPER NUMBER
12/22/2008		MAIL DATE		DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/577,995	VANCOMPERNOLLE ET AL.
	Examiner	Art Unit
	John Freeman	1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 October 2008.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3-9,14 and 15 is/are pending in the application.
 4a) Of the above claim(s) 7-9 and 14 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,3-6 and 15 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 20 February 2008 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10 October 2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 3-6 and 15 are rejected under 35 U.S.C. 112, first paragraph because the specification, while being enabling for a steel cord comprising at least two strands each comprising at least two filaments such that the cord has the structural elongation properties as recited in the claims, does not reasonably provide enablement for a steel cord comprising a possibly infinite number of strands each comprising a possibly infinite number of filaments such that the cord has the structural elongation properties recited. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

4. Case law holds that applicant's specification must be "commensurately enabling [regarding the scope of the claims]" *Ex Parte Kung*, 17 USPQ2d 1545, 1547 (Bd. Pat. App. Inter. 1990). Otherwise **undue experimentation** would be involved in determining how to practice and use applicant's invention. The test for undue experimentation as to whether or not all compounds within the scope of claims 1, 3-6 and 15 can be used as claimed and whether claims 1, 3-6 and 15 meet the test is stated in *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. Inter. 1986) and *In re Wands*, 8 USPQ2d 1400, 1404 (Fed.Cir. 1988). Upon applying this test to claims 1, 3-6 and 15, it is believed that undue experimentation **would** be required because:

(a) *The quantity of experimentation necessary is great* since claims 1, 3-6 and 15 read on any steel cord having a regular lay that satisfies the structural elongation test parameters outlined in the claims while the specification discloses on page 10, lines 4-13 that the only defining characteristic of the inventive regular-lay cord is the structural elongation properties recited in the claims. Therefore, the only way to determine if a given cord is an inventive cord is to subject the cord to the parameters defined by Applicant. It is not clear if there is an upper bound to the number of filaments and/or strands present in the cords such that the cords no longer satisfy the elongation properties claimed, or whether a cord having a particular number of filaments made by a process other than Applicant's process would be able to satisfy the property requirements.

(b) There is **no direction or guidance presented** for a cord having a large number of filaments or strands, e.g. 10 filaments per strand, or 25 strands per cord.

(c) There is an **absence of working examples** concerning a large number of filaments or strands, e.g. 10 filaments per strand, or 25 strands per cord.

5. In light of the above factors, it is seen that undue experimentation would be necessary to make and use the invention of claims 1, 3-6, and 15.

6. Furthermore, claims 1, 3-6 and 15 are rejected under 35 U.S.C. 112, first paragraph because the specification, while being enabling for a steel cord having the combinations of filaments shown on page 5, lines 24-35, and the other specific embodiments as long as the cord satisfies the structural elongation test parameters outlined in the claims, does not reasonably provide enablement for *all* possible combinations of filaments and strands as long as a given steel cord satisfies the structural elongation. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

7. Case law holds that applicant's specification must be "commensurately enabling [regarding the scope of the claims]" *Ex Parte Kung*, 17 USPQ2d 1545, 1547 (Bd. Pat. App. Inter. 1990). Otherwise **undue experimentation** would be involved in determining how to practice and use applicant's invention. The test for undue experimentation as to whether or not all compounds within the scope of claims 1, 3-6

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and 15 can be used as claimed and whether claims 1, 3-6 and 15 meet the test is stated in *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. Inter. 1986) and *In re Wands*, 8 USPQ2d 1400, 1404 (Fed.Cir. 1988). Upon applying this test to claims 1, 3-6 and 15, it is believed that undue experimentation **would** be required because:

- (a) *The quantity of experimentation necessary* is **great** since claims 1, 3-6 and 15 read on all regular-lay steel cords having at least two strands each comprising at least two filaments as long as the cord has the structural elongation properties claimed, regardless of the combination of filaments and strands, while the specification discloses only five specific embodiments of inventive cords, and a few known combinations listed on page 5.
- (b) There is **no direction or guidance presented** for any other type of combination.
- (c) There is an **absence of working examples** concerning any cord other than the five specific embodiments.

8. In light of the above factors, it is seen that undue experimentation would be necessary to make and use the invention of claims 1, 3-6, and 15.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1, 3-6, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 1 recites "at least two strands twisted together...to form said *strands*." The strands clearly cannot form themselves. For purposes of examination the examiner interprets the claim to read the strands "form said *cord*."

12. Claim 1 limits the number of twists per unit length a strand "locally obtains" during twisting. The phrase "locally obtains" renders the scope of the claim indefinite. It is not clear what is considered "local"

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with regard to the length of the strand. It is also unclear at what point during twisting the number of twists is limited, e.g. is it only when the strands are being twisted to form the cord, or is the period when the filaments are being twisted encompassed by this phrase?

13. Claims 1, 3-6, and 15 are indefinite for claiming the invention in terms of physical properties rather than the structural features that produce said properties. *Ex parte Slob*, 157 USPQ 172, states "Claims merely setting forth physical characteristics desired in an article, and not setting forth specific composition which would meet such characteristics, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in the future and which would impart said desired characteristics." Also, "it is necessary that the product be described with sufficient particularity that it can be identified so that one can determine what will and will not infringe." *Benger Labs, Ltd v. R.K. Laros Co.*, 135 USPQ 11, *In re Bridgeford* 149 USPQ 55, *Locklin et al. v. Switzer Bros., Inc.*, 131 USPQ 294. Furthermore, "Reciting the physical and chemical characteristics of the claimed product will not suffice where it is not certain that a sufficient number of characteristics have been recited that the claim reads only on the particular compound which applicant has invented." *Ex parte Siddiqui*, 156 USPQ 426, *Ex parte Davission et al.*, 133 USPQ 400, *Ex parte Fox*, 128 USPQ 157.

14. Applicant provides no guidelines to apprise one of ordinary skill of infringement other than trial and error to determine if a given cord passes Applicant's test method. In fact, Applicant discloses that, besides the test, no known structural features can identify the claimed invention:

All the product features as described in the claims 1 through 6 are the consequence of the processing of the cords only. Indeed, the invention cords do not discriminate themselves from the state-of-the-art product in terms of known structural features such as steel composition, coating, filament diameters, strand and cord lay lengths. For example the increase in equivalent elongation modulus as claimed in claim 4 and 5 has nothing to do with a change in lay length of the cord: they are exactly the same between invention cords and state-of-the-art cords. This feature is particularly mentioned, because it is known in the art that increasing the lay-length of the cord increases the modulus.

Claim Rejections - 35 USC § 102

15. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

16. Claims 1, 3-6, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Marino et al. (US 6,206,907).

17. Marino et al. (hereafter Marino) disclose a cable (Fig. 4). The cable can have a regular lay, i.e. the strands are twisted in a direction opposite to that of the wires (col 5 ln 14-27). The wires, or filaments, have diameters under 0.008 inch (203 µm).

18. The limitations of present claims 1 and 15 which limit the number of twists per unit length a strand obtains *during twisting* is a product-by-process limitation. As noted in MPEP 2113, "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

19. Also note "[t]he Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Therefore, barring evidence to the contrary, the examiner takes the position that Marino's cord inherently satisfies the test, or otherwise possesses the properties disclosed by Applicant in the present claims.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

21. Claims 1, 3-6, and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Sargent et al. (US 4,087,295).

22. Sargent et al. (hereafter Sargent) disclose a steel cord made from steel wire (col 1 ln 6-10). The cord comprises strands that in turn comprise a plurality of wires (col 2 ln 22-26). The diameters of the wires can be 0.5-15 mils (13-381 µm) (col 2 ln 3-7). As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). The wires are combined together and twisted in a direction opposite to that of the strands (i.e. an S/Z configuration) (col 2 ln 27-33).

23. The limitations of present claims 1 and 15 which limit the number of twists per unit length a strand obtains *during twisting* is a product-by-process limitation. As noted in MPEP 2113, "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

24. Also note "[t]he Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to

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applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Therefore, barring evidence to the contrary, the examiner takes the position that Sargent's cord intrinsically satisfies the test, or otherwise possesses the properties disclosed by Applicant in the present claims.

25. Claims 1, 3-6, and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Redmond (US 3,509,710).

26. Redmond discloses steel cords comprising strands made up of wires having a diameter less than 0.010 inch (254 µm) (col 1 ln 36-45). As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). The examples provided disclose cords having a first twist direction for the strands, and an opposite second twist direction for the cord (col 1 ln 66-col 2 ln 7).

27. The limitations of present claims 1 and 15 which limit the number of twists per unit length a strand obtains *during twisting* is a product-by-process limitation. As noted in MPEP 2113, "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

28. Also note "[t]he Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed

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product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

Therefore, barring evidence to the contrary, the examiner takes the position that Redmond's cord intrinsically satisfies the test, or otherwise possesses the properties disclosed by Applicant in the present claims.

Response to Arguments

29. Applicant's arguments with respect to claims 1, 3-6, and 15 have been considered but are moot in view of the new ground(s) of rejection.

30. Applicant argues Sargent's cord is made a different process than the one described in the present claim 1 (p8). The examiner notes, as above, Applicant bears the burden of proof to provide evidence that the final product of Sargent materially differs from the presently claimed invention. As noted in the rejections under 35 USC 112, second paragraph, Applicant admits on page 10 of the present specification that one of ordinary skill would not be able to ascertain whether a given cord infringes upon the claimed invention through any typical physical characteristics: only the test described by Applicant can provide the required proof. Therefore, to overcome the rejection Applicant must provide demonstrative evidence that Sargent's cord does not satisfy the elongation properties as presently claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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